54 TAC	108 CCT	162 TGC	216 CAT	270 GTC	324 TCC	378 AAT N	432 3AC
45 CAA GGA ATT	ATA	GTG	ACT		TCT	ATC	405 414 423 432 AGT CCC ATG CCT GTG ACA GAC CTA GAC S P M P V T E A L D
GGA	ATA	AGA	GAC	CTA GAC	315 CGA CAC TCT	351 360 369 ATG ACA ATT GAG GCG CCC ATC ACC AAG GTA ATC M T I E A P I T K V I	GCC 6
	99 AAG	153 ATC	207 TCT	261 TCA		369 AAG K	423 GAA E
TGG	GTG	TCC ATT	CAG	AAA GGC	AGA	ACC	ACA
GAG	AAT		GTT		CAG	ATC	GTG V
36 AAG	90 CAA	144 GTG	198 TGT	252 AGA	306 TCC AGC CAG AGA	360 ccc P	414 CCT P
299	CAA	TAT	GAA	AGG	TCC	GCG A	ATG M
18 27 36 ATA AAT TCA TGC ATC AGG ATA GGC AAG GAG TGG	ATA	135 144 AGA CAC TAT GTG	TCC	243 AAA GAC AGG	297 Gaa git	GAG E	S S S
27 AGG	81 AAT	135 AGA	189 ATA '			351 ATT I	405 AGT S
ATC	GAT	AAA ATT	GAG AAA	AAA CAT	GCA ACT	ACA T	396 GCT GCC CAG GAA AGT A A Q E S
TGC	GGA	AAA		AAA		ATG	GAA
18 TCA	72 AAC	126 GGA	180 GCT	234 GGC	288 CGT	342 CAT TCC H S	396 CAG Q
AAT	AAA	GGA	AAG	ACA	TCC	CAT H	CC SCC
ATA	AAG	CAG	AAT	CAG	၁၁၅	ATA	GCT
9 ACT	63 AAA	117 GGA	171 AAC	225 AAT	279 GTT	333 CGG R	387 4AT V
GAT	JJ9	ATT	299	GAT	AAA GCT	GCC A	ATC I
9 NNC GAT ACT A	TAT	117 GTC ATT GGA	AAT	225 ACA GAT AAT	AAA	333 ATG GCC CGG M A R	ATT ATC I
5.							

FIGURE 1A

9 🗗	O f	en (h	m 1	01.70		
486 GCT A	540 GGT G		648 ATA I		756 CGC R	810 TTA L
GGT G	GAT D	CAA	CGG R	CTG L	GCT A	TGG W
TYY F	TCT	ACT	CCA P	gaa E	TYYY F	TCA
477 CAG Q	531 ATG M	585 AAC N	639 CCA P	693 T'T'T F	747 ATG M	801 AGA R
CCA P	TTA L	AAA K	GTC V	ATT I	AAA K	CTA L
TCA	ည ဗ	ACA T	GAT D	GAT D	C.I.C	ACG I
	522 GGG G	576 TCA S	630 GAT D	684 TTT F	738 GGT G	792 TCA S
TTA L	GTT	CTT	CTT L	GAC D	CTT L	GAG E
GAG		GTT V	TCC	TGG W	TAT Y	TCC
	513 GAC D	567 TAT Y	621 ATC I	675 TAC Y	729 ATT I	783 TGC C
ACC	AAT N	GAA	CCC	GAA E		CAC H
AGA R	GCC	AAT	ACT	GAG	CCT	TTA L
450 CTA L	504 CAT H	558 GGG G	612 ATC I	666 AAT N	720 AGG R	774 TTC F
ATT I	CCC	TCA	ATA	GAA E	AAT N	GAA E
GAA E	GAT O	CTA L	AAT N	ATG M	CAC H	TGT
441 CTG L		549 AGA R				
GTG V	GAT			CGG R	ecc B	
CGT GTG R V	AAA K	TTG	GTT V	GCT A	GTT V	TYY F

864 CAT H	918 AAG K	972 CAT H	1026 GAG E	.080 TTG L	134 GAG E	188 ACA T
ACA T	ATA I	ATY I	AGT S	0CC	ATG M	3CC
TCT S	AGG R	ACC	GGA G	GCG A	AAC	ITA (
855 AAT N	909 GAG E	963 GCC A	.017 GCT A	071 CAT H	125 AAA . K	179 GTC '
CAC H	AAG K	GCA	1 AAT N	л САС Н	1 TYT . F	ATG O
TAC	TCC	ATC	TGT	AGC	ATA I	GAC D
846 CCC P	900 CTC L	954 CTC L	008 CTG L	.062 GAG E	116 AAT N	170. ATC
AAT N	TYYY F	GCA	1 TTC F	CTG L	TGC C	1 ATT I
TCC	TAT Y	GCT A	TCC	GTG V	AAA K	999 9
837 TCC S	891 GCC A	927 936 945 954 963 972 TTA GAT CCA AIT GAT GAC GTC GCT GCA CTC ATC GCA GCC ACC ATT CAT L D P I D E V A A L I A A T I H	999 AAC N	.053 GCT A	.107 GAT D	161 CAG Q
CAT H	ACT	GAG	ACC T	1 ACT T	J GAT D	L CGC R
TAT Y	GCC A	GAT	AGA R	GAC D	GGA G	CTG L
828 AAT N	882 CAT H	936 ATT I	990 999 9	.044 AAT N	.098 ACT T	152 ACA T
GCC A	CIT	CCA P	CCT	TAC Y	ACC T	1 CGG R
GAA	GTG V	GAT D	CAC H	TTG	CTG L	TAT Y
819 ATC I	. 873 GAT D	927 TTA L	981 GAT D	.035 ATT I	.089 CAG Q	.143 GAT D
ATT I	GCT	ACT	GTG V	GCC	1 TTC F	1 AAT N
819 CAA ATT ATC Q I I	TCT GCT S A	927 GAA ACT TTA E T L	981 GAT GTG GAT D V D	1035 CTG GCC ATT L A I	1089 GCC TTC CAG A F Q	1143 AGG AAT GAT R N D

FIGURE 10

1242 AAA K	1296 ATA I	1350 ATT I	1404 TGG W	1458 CAG Q	.512 AAA K	.566 GAT D
AAC N	GTG V	CTG	GAG	CAG Q	CCC P	TGG W
ATC I	GAA E	ATG M	ATC	AAG K	ATC I	GCT A
1233 AGC S	1287 CAG Q	1341 CGA R	1395 TGC C	1449 GAG E	1503 AGC S	1557 GAT D
AAC	AAC	AAA K	TAC	GAA	. JGC .] TYPT F
GTC	AAA K	ATC	CAG Q	GAT D.	ACC	ATG M
1224 TTT F	1278 GAT D	1332 CTA L	1386 CTG L	1440 ACT T	1494 AAT N	1548 GAC D
AAA K	ACT T	ACC	CCC	CAG	AGA R	ACA
AAC N	GAA E	CGG R	CGA R	TCT	GAC	ATC
1215 GTC V	1269 GGG G	1323 AAC N	1377 TGC C	1431 TTT F	1485 TTT F	1539 TTC F
CAT	AAT	GAG	CCC	TAT	GTG V	TAC Y
GAG	GAA	CCA P	AAT	GAA	CCA P	GAT D
1206 TTT F	1260 GAA E	1314 ACT T	1368 TCC S	1422 GAA E	1476 ATG M	1530 ATT I
CAC	CTA	AGG R	GTG V	TCG	GTG V	TTC F
AGG R	ACA T	CTT	GAT D	ATT I	GTG V	TCT
1197 ACA T	1251 GCA A	1305 ATG M	1359 GCT A	1413 CGC R	1467 CCT P	.521 ATC I
ATG M	TTG L	ACT T	TGT C	GCA A	TTA L	CAA Q
GAA	1251 1260 1269 1278 1287 1296 CCC TTG GCA ACT GAA AAT GGG GAA ACT GAT AAA AAC CAG GAA GTG ATA P L A T L E E N G E T D K N Q E V I	AAC	AAA K	GCT A	ე ე	TCC

FIGURE 1D

Docket No.: PF-0057-4 CON Inventors: Au-Young et al. Title: CyclicNucleotide Phosphodiesterases Serial No.: To Be Determined

1584 1593 1602 1611 1620 GAC CTG CCT GAT TTA ATG CAG CAT CTT GAC AAC AAC TTT AAA TAC D L P D L M Q H L D N N F K Y	1638 1647 1656 1665 1674 CTG GAC GAA ATG AAG CTG CGG AAC CTC CGA CCT CCT GAA TAG L D E M K L R N L R P P E	1692 1701 1710 1719 1728 CCA CCC AGA GCC CTG AAG CTT TGT TCC TTC GGT CAT TTG GAA TTC	1746 1755 1764 1773 1782 RAC CAG AGC TCC TTG GTC CTT TCA GTR CWA GGC AGN ANA CAG CCC	1800 1809 1818 1827 1836 ATA GCC TGT GAA AGC CCR CGG GGA CAT CAG TAA CCT TCT KCA GCC	1854 1863 1872 1881 1890 TGC CAT TAC TGT CAA GTG AGA CTT GGC CMC TGT ARC CTG GGC CTK	1908 1917 1926 1935 1944 CTC TTC AGA AAG GCA CAT KAG GAC CAC GGN TTT SGC TCA GTT TCT
F	CC.	TT.	AN	J.C.	STS	TCA
1611 AAC N	1665 A CCT P	1719 CAT	1773	1827 . CCT	1881 ' ARC	1935 ' SGC
AAC	CCA	GGT	၁၅၅	TAA	TGT	TIL
GAC	CGA R	TTC	CWA	CAG	CMC	GGN
1602 CTT L	1656 CTC L	1710 TCC	1764 GTR	1818 , CAT	1872 GGC	1926 : CAC
CAT H	AAC N	1 TGT	1 TCA	1 GGA	1 CIT	1 GAC
CAG Q	000 W	CTT	CTT	999	AGA	KAG
1593 ATG	1647 ; CTG L	.701 AAG	1755 3 GTC	1809 CCR	1863 GTG	1917 CAT
TTA L	AAG K	T101 CTG AAG	1 TYG	AGC	CAA	1 GCA
GAT D	ATG M	သွ	TCC	GAA	TGT	AAG
1584 CCT P	1638 GAA E	1692 AGA	1746 3 AGC	1800 TGT	1854 T TAC	1908 AGA
CTG L	GAC D	CCC	1 CAĞ	acc 1	CAT	TTC
GAC	CTG	CCA	RAC	ATA	TGC	CTC
1575 GTA V	1629 GGA G	1683 ACA	1737 GCA	1791 C TGY	1845 CAA	1899
) TYY F	AAA K	1683 TGG GAG ACA	1737 CTG AGG GCA	1791 CCG ATC TGY	1845 ACC ATC CAA	1899 CTK CAG GAG
1575 GCC TYTY GTA A F V	1629 TGG AAA GGA W K G	TGG	CTG	500	ACC	CTK

FIGURE 1F

Docket No.: PF-0057-4 CON Inventors: Au-Young et al. Title: CyclicNucleotide Phosphodiesterases Serial No.: To Be Determined

1962 1971 1980 1989 1998 CAA GGT CTG GAG TKC CCC TGC MAA GGG TAT TGA TGG ACT TCC TKC	2052 CAA CAC TTA	2097 2106 ACA TCA NAG NAG GTT	2151 2160 TTT TAA AAT TGA GTA	٠.
1989 . TGG	2043 GTT	2097 TCA	51 AA 1	3.
15 3A 1	2043 TAC GTT	20 'A T	2151 T TAA	2
) <u>H</u>	T	AC	I	ည
TAI	ANI	TTC	CIC	NAT
1980 GGG	2034 CTC	2088 TTT	2142 CTT	2196 ' TAA
1 AA (2. CT (2(AC 7	2 <u>.</u> 34 C	21 IT T
∑	r T	A	7	TP
73	AA	AAC	GAG	GAT
1971 : ccc	2025 AAC	2079 TTT	2133 TGA	2187 CTT
1 TKC	TCC	2.	2 NAC	2; GGA (
GAG	2016 2025 2034 ATG TCT ATT TCC AAC AAT TCT CTC ANT	2070 2079 2088 AAT GGC AAT AGG ATC TTT AAC AAC TTT TTC	2124 2133 2142 ACT TGG GNA CAC NAC TGA GAG TGA CTT CTC	2178 2187 2196 AAA ATA AAA TTT GGA CTT GAT TAT TAA NAT CCC N 3
1962 CTG	2016 TCT	2070 AAT	2124 GNA	2178 AAA
GGT	ATG	390 300 300	2 TGG	2 ATA
CAA	AGC	AAT	ACT	AAA
1953 ACA	2007 CAG	2061 GCT	2115 CTC	
1953 GGT AAA ACA	2007 CAG TGA CAG	2061 AGA ACG GCT	2115 CAA TCG CTC	2169 ACA GAT GGA
GGT	CAG	AGA	CAA	ACA (

FIGURE 1F

54	AAC N	108 ATT I	162 TGG W	216 CAG Q	
	TGC	ATG	GAA E	AGA R	
	GAA E	ATG M	ATT I	AAG K	
45	TGT C	99 NGC X	153 TGC C	207 GAG E	
	GAC	AAA K	CTG	GAA	
	AGC S	ATC	GÀC D	3AT O	
	ე ე ე	90 CTG	144 TTG L	198 ACT T	
	GAA E	ATC	ည္သင္တ	CAG	ñ
	ATT I	CAA	CGA R	GCA	GAC
27	GAG E	81 AAC N	135 TGC C	189 TTT F	243 TTT F
	GCT	GNA		TAT Y	GTG V
	GCA A	CCT	AAC	GAG	NCA X
18	A ATG GC	72 TTC F		180 GAG E	234 ATG M
	CC P	AAC	GNG	TCT	GTG. V
	AAG K	AAG K	GAN X		GTG V
0	AAC N	63 0 6 6	117 GCT A	171 AGG R	225 CCT P
	ATC I	GCT A	TGT C	999 9	CTA L
	5' NNC ATC AAC X X I N I	CCT GCT (AAG K	GCT GGG	GGA CTA G
	5.				

FIGURE ?

4 5	ω ()	0) (D				
54 AAT N	108 CTC	162 TTC L	216 CCC P	270 CGA R	324 AGT S	378 CCT P
AGA R	AAA K	GAG E	AAC	GTG V	AAC N	AAT N
CAC H	TCA S	GAA E	gaa E	GAG (GAA	3CA
45 GAC D	99 TCA S	153 AGA R	207 GTA V	261 3GA 3	315 FTA	869 PAT
ATA I	AGA R	GAT D	TAT Y	IYIY F	GCA A	CAG 2
ATC	ATC I	GTG V	AGG R	SAG E	ACT [ATA [
36 ATC I	90 TCT S	144 AGG R	198 AGG R	252 CTG L	306 ITC F	360 PTT F
ATT I	AGG R	CGC R	ACA T	CAG Q	STA V	S. R
GAC D	TGC	GTA V	TYT F	CTC L	TCA	GAC
27 CAT H	81 CTG L	135 GTA V	189 GGA G	243 CTG L	297 AAC N	351 GAA E
CAT H	GCA	GGT G	GCT A	GAA	TGT	AGC S
AAA K	GAG E	GTT V	TCT	AAT N	GCT A	
18 GAC D	72 GCA A	126 ATT I	180 ATT I		288 AGG R	
CTG	GAT D	GTT V	TTC	TGC C	CTC	GAA E
TTC	CTG	ACA	CCT P	ecc A	AAA K	ATT
9 TGT C	63 CAG Q	117 AAC N	171 ATG M	225 ATG M	279 CTG L	333 GCA A
GCC A	CGA R	GAA I	GTA V	ATC	CAA	GAT D
9 CTT GCC TGT L A C	CCT P	TCA	TCC	AAC N	TCA	GAA E
5.						

FIGURE 3A

01 6	10.4	- •.				•
432 TTA L	486 TCA S	540 AAC N	594 GGA G	648 GCT A	702 GGC G	756 CGT R
GAG	AAT N	₹ √	GGA G	AAG K	ACA (rcc
AAG K	ATA I	AAG K	cag Q	AAT N	CAG Q	CCC A
423 GGG G	477 ACT T		585 GGA G	639 AAC N	693 AAT N	747 3TT 7
ATA I	GAT D	GCC A	ATT I	3 3 3	3AT)	3CT
414 GAA TTA E L	CTC	ľAT V	3TC	'AT	CA .	AA
414 3AA E	168 rTG	522 rac	576 CT	30 GC	84 GT	38 TC
GGT	GAC D	ATY I	ata I	STG /	C.	AC
TC.	GC¹ À	<i>1</i> 99	ATA I	AGA R	3AC	TA
405 CAG Q	459 AAG K	513 CAA Q	567 AAG K	621 ATC I	675 ITCT S	729 ICA S
TAT Y	AAA K	TGG W	GTG V	ATT I	CAG Q	၁၅၅
	GAA	GAG	AAT	TCC	GTT V	
396 ATG M	450 AAT N	504 AAG K	558 CAA Q	612 GTG V	666 TGT C	720 AGA R
ACA T	ATA I	် ၁၉ ၁၉	CAA Q	TAT Y	3AA	4GG
ACA	CCT	ATA I	ATA I	CAC H	TCC	GAC D
387 GAA E	441 GTG V	195 AGG	549 AAT N	603 AGA R	657 ATA I	711 AAA K
GCA TTT A F	GAA	ATC A	A GAT D	ATT I	AAA K	CAT H
GCA A	GGA	TGC	GGA G	603 AAA ATT AGA K I R	GAG E	711 AAA CAT AAA K H K

FIGURE 3B

810 TCC S	819 828 837 846 855 864 ATT GAG GCG CCC ATC AAG GTA ATC AAT GTT ATC AAT GCT GCC CAG I E A P I T K V I N V I N A A Q	918 CTA	972 :AT	126 136	80 TC	34 AT
Ę	ပ္	5, O I	2, O T	10 4 G	10 A A	11 N
Üπ	© ∢	AT I	ပ္သ	TC) S	AT.A	GAAA
ATA	GCT A	GAA E	GAT D	CTA L	AAT	ATG (
801 CGG	855 AAT N	909 CTG L	963 GAT D	1017 AGA R	.071 AGC S	125 GCC
GCC A	ATC I	GTG V	GAT D	CGA R	TCA S	1 CGG R
ATG	GTT V	CGT R	AAA K	TTG	GTT	SCT O
792 TCC S	846 AAT N	900 GAC D	954 GCT A	008 GGT G	062 ATG (116 ATA (
TCT S	ATC	CTA	GGT	1 GAT D	CAA 1	2GG 7
CAC H	GTA V	GCC	TYTY F	TCT	ACT	CCA (
783 CGA R	837 AAG K	891 GAA E	945 CAG Q	999 ATG M	053 AAC N	107 CCA (
AGA R	ACC	ACA	CCA P	TTA L	AAA K	GTC (
CAG Q	ATC	GTG V	TCA	. b ენნ	ACA	GAT O
774 AGC S	828 CCC P	882 CCT P	936 TAT Y	990 GGG G	044 TCA S	098 GAT (
TCC	GCG A	ATG M	TTA L	GTT V	1 CTT L	CTY CTY L
GTT V	GAG E	CCC	GAG E	CTT	GTT V	TCC
765 Gaa E	.819 ATT I	873 AGT S	927 ACT T	981 GAC D	035 TAT Y	089 ATC 1
765 GCA ACT GAA A T E	ACA T	AGT S	ACC T	AAT	1 GAA E	CCC J
GCA A	ATG M	GAA AGT Z	927 AGA ACC ACT R T T	981 GCC AAT GAC A N D	1035 AAT GAA TAT N E Y	1089 ACT CCC ATC T P I

FIGURE 3C

1188 AGG R	.197 1206 1215 1224 1233 1242 ATT TAT CTT GGT CTC AAA ATG TTT GCT CGC TTT GGA ATC TGT GAA TTC I Y L G L K M F A R F G I C E F	1296 AAT N	350 САТ Н	404 ATT I	458 3GG	512 AAT
AAT	GAA E	GCC A	$\operatorname*{CT\dot{T}}_{L}$	CCA P	1, CCT (15 PAC A
CAC H	TGT	GAA	GTG V	GAT (CAC (FIG 1
1179 ACC T	1233 ATC I	1287 ATC I	341 GAT D	395 TTA	449 GAT (D	503 ATT 1 I I
GCC	GGA G	1 ATT I	1 GCT A	ACT T	GTG (3CC 7
GCT	TYPT	CAA Q -	TCT	GAA E	GAT (CTG (
11-70 GAG E	1224 CGC R	1278 TTA L	1332 CAT H	386 AAG K	440 CAT H	494 - GAG (E
CTG	GCT	TGG	ACA T	1 ATA I	1 ATT I	AGT S
GAA E	T'I'T F	TCA	TCT	AGG R	ACC	GGA
1161 TTT F	1215 ATG M	1269 AGA R	1323 AAT N	1377 GAG E	431 GCC A	485 GCT A
ATT I	AAA K	CTA	CAC	AAG K	1 GCA A	1 AAT N
GAT	CTC	ACG T	TAC Y	TCC	ATC I	TGT
1152 TTT F	1206 GGT G	1260 TCA S	1314 CCC P	368 CTC L	422 CTC L	476 CTG L
GAC	CTT	GAG	AAT	17TT F	GCA A	1 TTC F
TGG W	TAT Y	TCC	TCC	TAT Y	GCT A	TCC
1143 GAG GÄA TAC ' E E Y	1197 CCT TTG ATT P L I	1251 TGC C	1305 TCC S	1359 GCC A	.413 GTC V	467 AAC N
GÄÄ E	TTG	CAC	CAT	ACT T	GAG E	ACC T
GAG	CCT	1251 TTA CAC TGC L H C	1305 TAT CAT TCC Y H S	1359 GCC ACT GCC A T A	1413 GAT GAG GTC C D E V	1467 AGA ACC AAC R T N

FIGURE 3D

9.0 T.	0 A	4 F	∞ ∢	~ =	10.6	- 4
156 AC T	162 AC T	167 TYF F	172 GA E	178; AC	.83(TC(S	890 Gaa E
ACC	CGG R	CAC H	CTA	AGG R	STG	lyce S
CTG	TAT Y	A.A.G. K	ACA [ĮĮ,	AT (
57 AG	11 AT	65 2A .	61	25 26 1	7 E	1 C A
15 C C Q	16 P. G. D	16.	17. 3 G(177 A1	182 GC A	188 CG R
TTC	AA1 N	ATC	TTG	ACT T	TGT	GCA
GCC	AGG R	GAA	႕ ၁၁၁	A.A.C. N	AAA K	SCT O
548 FTG	502 3AG	556 CA	10	64 TA	18 IT	36 (
1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	16 G C	16 C 2	17 C A	17 3 A I	18 1 A E	. 18. ₹ 18.
₽ GC	AT M	Ö ₹	A A	GTC V	C.I.C	GAC
gce A	AAC N	TTA L	ATC	gaa E	ATG M	ATC I
1539 CAT H	1593 AAA K	647 GTC V	.701 AGC S	.755 CAG Q	809 CGA R	863 TGC C
CAC	TYTT	ATG M	AAC N	AAC N	1 AAA K	TAC Y
AGC S	ATA I	GAC	GTC	AAA K	ATC	CAG '
1530 GAG E	584 AAT N	638 ATC I	692 TTT F	746 GAT D	800 CTA	854 CTG (
CTG L	TGC C	, ATT I	1 AAA K	ACT T	ACC (2CC (
GTG V	AAA K	9 9 9	683 1692 1701 1710 1719 1728 GTC AAC AAA TTT GTC AAC ATC AAC AAA CCC TTG GCA ACA CTA GAA V N K F V N S I N K P L A T L E	GAA	2000	CGA (
.521 GCT A	575 GAT D	629 CAG Q	683 GTC V	737 GGG G	791 AAC (345 TGC (
ACT T	1 GAT D	1 CGC R	CAT H	AAT N	GAG ,	CCC '
1521 GAC ACT GCT D T A	1575 GGA GAT GAT G D D	1629 CTG CGC CAG L R Q	1683 GAG CAT GTC E H V	1737 GAA AAT GGG E N G	1791 CCA GAG AAC P E N	1845 AAT CCC TGC N P C

FIGURE 3E

						•
1908 1917 1926 1935 1944 TCT CAG ACT GAT GAA GAG AAG CAG CAG GGC TTA CCT GTG GTG ATG S Q T D E E K Q Q G L P V V M	1953 1962 1971 1980 1989 1998 CCA GTG TTT GAC AGA AAT ACC TGC AGC ATC CCC AAA TCC CAA ATC TCT TTC ATT P V F D R N T C S I P K S Q I S F I	2052 CCT P	106 GAA E	160 AGA	214 GCT	268 3AA
GTG V	TTC	CTG	GAC D	2000	2 AGA (2: 7GT (
GTG V	TCT	GAC D	CTG L	CC A	7 20%	CC 1
1935 . CCT P	1989 ATC I	2043 GTA V	097 GGA G	151 ACA (205 3CA (2259 ATA G
TTA	CAA O	2 TYFY F	AAA K	2 GAG	2; 4GG (22 .GC ?
9 299	TCC	GCC A	TGG W	99	CTG 7	VTC 7
1926 CAG GGC TTP Q G L	1980 AAA K	2034 GAT D	.088 TAC Y	2142 TAG	196 FTC (2250 CCG 4
CAG	CCC T	TGG ₩	2 AAA K	2 GAA E	2 SAA	25 200 (
AAG K	ATC	GCT	T'I'I F	CCT	FTG (CAG (
1917 GAG E	1971 AGC S	2025 GAT D	079 AAC N	2133 CCT P	187 CAT '	2241 GAA (
GAA	TGC	Type	AAC N	cca P	2 GGT (2; 3CA (
GAT D	ACC T	ATG	GAC D	CGA R	MC (PAG (
1908 ; ACT T	1962 AAT N	2016 GAC D	070 CTT L	2124 CTC L	178 ICC '	2232 TAC
CAG Q	AGA R	ACA	2 CAT H	AAC N	2 TGT	2 CAG '
TCT	GAC D	ATC	2070 2079 2088 2097 2106 CAG CAT CTT GAC AAC TTT AAA TAC TGG AAA GGA CTG GAC GAA Q H L D N N F K Y W K G L D E	CGG R	CTT	TTT.
1899 ' T'T' F	1953 TYT F	2007 TTC F	2061 ATG M	2115 CTG L	169 AAG	2223, TCC '
1899 GAA TAT TTT E Y F	GTG V	2007 2025 2034 2043 2052 GAT TAC TTC ATC ACA GAC ATG TTT GAT GCT TGG GAT GCC TTT GTA GAC CTG CCT D Y F I T D M F D A W D A F V D L P	2 TTA L	AAG K	cTG .	2. TGG '
GAA	CCA P	GAT D	2061 GAT TTA ATG (D L M (2115 2124 2133 2142 2151 2160 ATG AAG CTG CGG AAC CTC CGA CCT CCT GAA TAG TGG GAG ACA CCC AGA M K L R N L R P P F E	2169 2178 2187 2196 2205 2214 GCC CTG AAG CTT TGC TTC GGT CAT TTG GAA TTC CTG AGG GCA GCC AGA GCT	2223 2233 2241 2250 2259 2268 CCT TGG TCC TTT CAG TAC TAG GCA GAA CAG CCC CCG ATC TGC ATA GCC TGT GAA

FIGURE 3F

2322 CAT TAC TGT	2376 TTC AGA AAG	2403 2412 2421 2430 CCT CAG TTT CTG GTA AAA CAC AAG GTC TGG AGT	2484 CTA TTG	2529 2538 CTA ATG GCA ATA GGA	2565 2574 2583 2592 CAT AGA AGG TGC AAT CGC TCA CTT GGG AAC ACT	2646 AAT TYG	2691 2700 TTA TTA AAA GCT CAA	2718 2727 2736 2745 2754 TGA ATT CAA AAA TAC TTC AGA GCC AAA GCC AAC TTC AAA TAC CGT
	TTC	GTC '	TCT (GCA A	d 555	TAA A	AAA G	AAA T.
2313 CAA TGC	2340 2349 2358 2367 GGC CAC TGT AGC CTG GGG CTG CTG CAG GAG CTC	2421 AC AAG	2418 2457 2466 2475 AAG GGT ATT GAT GGA CTT CCT GCC AGT GAC AGA GCA	2529 IA ATG	2583 A CTT	2610 2619 2628 2637 TTC TCT TTT AAA ATT GAG TAG CAG ATG AAA AAT TAA	2691 A TYA A	2745 C TTC)
	AG G	₽ ≱	AC AC			G AA		C AA
Æ	3	2	75	ၓ	පි	AT	AT	Ş
2286 2295 2304 GGA CAT CAG TAA CCT TCT GCA GCC ACC ATC	2358 G CTG	2412 3 GTA	2466 2 AGT	2520 TAA GAA CGG	2574 AAT	2628 CAG	2664 2673 2682 AAT ATC AAT TAA AAT GTT TTA TTT ATT	2736 AAA
ပ္ပ	ર્ટ	S.	ÿ	TA	75	TAG	ITA	ည္ဟ
GCA	299	TTT	CCT	ACT	AGG	GAG	GTT '	AGA (
2295 TCT	2349 : CTG	2403	2457 CTT	2511 TTC AGC	2565 AGA	2619 ATT	2673 AAT	2727 TTC
S)	AGC	CCT	GGA	TTC		AAA	TAA	TAC
TAA	TGT	TTG	GAT	ACG	CAT	TYY	AAT	AAA
2286 CAG	2340 CAC	2394 GAC CAC GGT TYG	2448 ATT	2502 CTC TCA: GTT: ACG	2556 TTT TCA CAT	2610 TCT	2664	2718 CAA
CAT		CAC	GGT	TCA	Till	TTC	2 AAT	2 ATT
GGA	CIT	GAC	AAG	CTC	ACT	GAC	ATT	TGA
2277 AGC CCA CGG	2331 CAA GTG AGA	2385 GAG	2439 GCA	2493 ATT	2547 TA GCA			
CCA	GTG	2385 GCA CAT GAG	2439 GCC CCT GCA	2493 CAA ACA AIT	2547 TCT TTA GCA	2601 ACT GAG AGT	2655 AAC TTG ATT	2709 TAT TYT CTA
AGC	CAA	GCA	၁၁၅	CAA	TCT	ACT	AAC	TAT

FIGURE 3G

2808 ACT TAT	2862 TAT TCA	2916 GTA TYC	2970 AAC AGC	3024 ACT CTC	3078 TTT ATA	3132 TTC CTT	3186 AAC CAA
CAG	AAA	GTC	TGA	TAG	AAT	ATA	TAT
GGT ATA	2853 CTA TAG	2907 GCT GGG	2961 GGG CTC	3015 TAA AAC	3051 3060 3069 3078 TTA GGA CTT AAC ACT TTT TTC TAA AAT TTT ATA	3123 3132 TAC AAA ATA TYC CTY	3177 ACA TYT
CTT	GCA	AAA	CCA	AGG	TYFY	TYIC	TTG
CCA TTA CTT	2844 TTT ACT	2898 CTG GAA	2952 TAG AAC	3006 TCC CCA	3060 AAC ACT	3114 TAC TGT	3168 AAT GAA
TAT	ACT	TAA	GTA	AAC	CTT.	TTA '	rrr 1
2781 ATT CAT	2835 AAT GAC	2889 TGA GGC	2943 TCT ACT	2997 ACA GGT	3051 TTA GGA	3105 3114 TCT ATT TTA TAC TGT TTC	3159 TGA ATA
CAT	TAA	GAT	GCT	TTC			AAT '
CAC CAA ATT TAC ATG ATT CAT ATT CAT TAT GCA TTA CTT GGT ATA CAG ACT TAT	2817 2826 2835 2844 2853 2862 TIT CAT AAT GCA AAT TAA AAT GAC ACT ITT ACT GCA CTA TAG AAA TAT TCA	2871 2880 2889 2898 2907 2916 TGT ATG TTA AAC TTT TCT GAT TGA GGC TAA CTG GAA AAA GCT GGG GTC GTA TTC	2925 2934 2943 2952 2961 2970 TAA GTG CTA AAG AAG GCT GTT TCT ACT GTA TAG AAC CCA GGG CTC TGA AAC AGC	2988 2997 3006 3015 3024 TTA ATG CAC TTC ACA GGT AAC TCC CCA AGG TAA AAC TAG ACT CTC	3042 CGC AAA GAA AAG	3096 CCA AAA GTC TAC	3141 3150 3159 3168 3177 3186 ATA AAA ACA AAG AAC AAA AAT TGA ATA TTT AAT GAA TTG ACA TTT TAT AAC CAA
2763 CAA ATT	2817 CAT AAT	2871 ATG TTA A	2925 GTG CTA 1	2979 TCT AGC CGC CTA	3033 THG THG GTT C	3087 CAA TYY	3141 AAA ACA A
GAC	TYFY	TGT	TAA	TCT	TTG	ATT	ATA

FIGURE 3H

3240	3294	3348	.
AAG AGG TYC	GAC ATG	TTC CCA GAT	
AAG	CTT	TTC	AAA
3231	3285	3339	3393
TYT ATA	ATG ACA	GTT TYP	AAA AAA
AAA	AAA	GTG	AAA
3222	3276	3330	3384
TGA TGC CAG AAA	CCA TAA	GTA TTT	AAA AAA
TGA	ATA	CTC	AAG
3213	3258 3267 3276 3285 3294	CAT TIT AAA CTC GTA TIT GTG GTT TIT	3366 3375 3384 3393
GGG AAT CTT	ACA CCT TGA ATA AGC ATA ATA CCA TAA AAA ATG ACA CTT GAC ATG		ATT AAA CCA TYT CTT TYT AAG AAA AAA AAA AAA AAA AAA
3204	3258	3312	3366
ATC TAC GGT	ACA CCT TGA	TTG TCA TTT CAT	ATT AAA CCA
3195	3249	3303	3357
CCT GTT TYT	TGT ATC TTC	TCA ATG TAT	AAA AAT GAA

FIGURE 3

54 ' AGA R	108 AAT N	162 CAT H	216 ATG M	270 GGG G	324 TTA L	378 TAT Y
CAT H	ACA T	r GAC C	jyyy F	'AT	₹	AG
GAT D	GC	GA'	AG2 R	2. A.A.	CA	TT
45 ATT I	99 CGG R	ις <u>Σ</u>	5 8 ~	61 I'A	F	ව ව
GTA	ATC	21	Ş	4	STG 7	3 PAC C
AT	TC S	, GG	F. F	Ę	₹5	26
3 AT I	م کھ	4 5	800 %	52 IG)6 \T	9 E
GAA E	1 <u>G</u> C	Ĕ,	Ö 🛦	A A	53	ဥ .
Č ≖	33	Į.	Ă.	Z A) 2C	CA
CA H	8 CC 2	13.5 GC2	189 24C L	243 PAT	97	51 TA
AA(GAA	CTC	CTT	JGC	T.	A
GAT D	GCA A	ATC	CCT	GCT A	AAA S	ATA (
18 CTT L	72 GA:1 D	126 GTG V	180 CTT L	234 ATT I	288 TTC /	342 GCC 1 A]
TTT	TTC		GTC V	ata I	CAG ?	
TGC	AAC	CAC H	TCA	AGC S	TCC (S	CAT (
9 CTT GAA	. 63 CAG Q	117 GAG E	71 CG	25 GC	279 CGC 7 R	333 TGT (C I
CTT	ACT	TCC	1 A GAG G E	2 S AAT A N S	STT (ZAC 1
GCC	CAA	CCC	GAA E	GAG Z	GAA GTT E V	GAT CAC T
-			_	○ 	ОЩ	0

FIGURE 4A

432 GGA G	486 GAC D	540 GCC A	594 ATT I	648 ACC T	702 TCT S	756 GAC D
CTG	CTC	TAT Y	. GTG /	rgr C	4AT V	ATT
CTC L	CTT	TAC Y	CCA	G	3AC	TCC ,
423 GAG E	47.7 GAC D	531 STT V	585 ACC F	539 ?TG	693 649	47 AG
GGT		999	ATC	AA .	CA .	A A
AAA K	CGG R	CAG	AAG K	AAG K	GAT D	AGG R
414 CAC H	468 AAC N	522 TGC W	576 GTG V	630 CTC L	684 CGT R	738 AGG R
TAC	AAG K	GAG	CAC H		CAT H	AAC N
ე ე	GAT	AAG K	cag Q	GTC	ATT I	AAG K
405 ATG	459 AGC S	513 GGA G	567 CAA Q	621 TTT F	675 AAG K	729 TAT Y
ATG M	AAA	AAG K	ATC	CAT H	CAC H	AGA R
AGG R	CCC		AGC	AGG R	ATT I	
396 GAA E	450 CTG L	504 ATC I	558 GAC D	612 ATT I	566 2AG 2	720 rca
GCC TTC A F	GAT D	TGC	999	AAA K	AAG K	CAT
B GCC	GCT A	ACA TGC	TCC	9 9 9	AAT N	CCT
387 CCA P	441 CTC L	495 AAT N	549 AAA K	603 GGA G	657 AAT N	711 GAG E
AAC N	GAA	ATC I	CGG R	CAA Q	GAC	711 ACA GAG T E
387 GTC AAC CCA V N P	AAA GAA CTC K K E L	ACC	AGA R	ა ეფი	ACT	CAG

FIGURE 4B

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810 , CGC R	819 828 837 846 855 864 TCC ATG ACC ATC GAG GCT CCC ATC ACA AAG S M A R I H S M T I E A P I T K	918 GAA E	972 CAG Q	.026 ATG M	080 GTG V	134 CCT P
CGT	ACA T	GCG A	CCT P	CTG L	AAT N	1 CCC P
AAT N	ATC	GTA V	TCC	၁၅၅	AAG . K	orr.
801 CAG Q	855 CCC P	909 ACA T	963 TAC -Y	017 GGA G	071 ACT T	125 3AT (
CTG	GCT A	GTC V	CTG	1 GTT V	1 I'I'I' , F '	AAT O
AGC	GAG	CCA P	GAA E	CTT	GTG V	ATC I
792 CCA P	846 ATC I	900 AGC S	954 ACA T	008 GAT D	062 TAT (116 ACC 7
GCA A	ACC	AAC N	ACC	1 AGT S	GAG E	ATA I
GAT D	ATG M	GAA E	CGG	ACC	AAC	CCA P
783 AGT S	837 TCC S	891 CAA Q	945 TTA L	999 CAC H	053 GGA . G .	ATG O
၁၅၅	CAC	GCC A	ATT I	CCC	TCA S	3CA A
CGA R	ATC I	GCA	GAG	GAT D	CTG L	CTYT (
774 TCT S	828 AGG R	882 AAT N	936 CTA L	990 GAA E	044 AGA R	098 CAC (
TCA	SCG	ATC	GTT V	GAT D	AGA R	AGT (
ATA I	ATG M	ATA I	AGA R	AAA K	I. I.	CAC
765 TCG \$	819 TCC S	873 AAT N	927 GAC D	981 ACC T	035 GGC G	089 AGT (
AAA K	CCG	ATA I	TTG	GGT	GAC O	1089 CAG AGT Q S
GTG AAA 9	TAT Y	GTT V	GCC	981 CTG GGT ACC L G T	1035 ACT GAC GGC T D G	CAC (

FIGURE 4C

	_						
1188	GAA	1197 1206 1215 1224 1233 1242 GCC ATT ACG CAT AAA AGG CCA TTG GTT TAT CTG GGC TTA AAG GTC TTC A I T H K R P L V Y L G L K V F	1296 GCC A	1350 TCC \$	1404 AGA R	.458 ACA T	512 GGC G
	TYYY F	GTC V	CGG R	AAC	GAA E	GCC A	3CA
	ATC I	AAG K	CTT	CAC H	AAG K	GCT O	AAT O
1179	AAC	1233 TTA L	1287 ACT T	1341 TAC Y	.395 GGA G	449 ATT	503 TGC ,
	TTC F	ာ့	ACC T	0CC ₽	CTT	CTC	CTC
	GAC D	CTG	GAA E	AAT N	TYPT	3CC 6	ric (
1170	TGG W	1224 TAT Y	.278 TCT S	.332 TCC S	386 TTC F	440 GCA (TCT
•	AGT S	GTT V	TGT C	1 TCT S	1 GCT A	GTG V	AAC '
	GAG E	TTG	AAC	CAC H	ACC	GAG	ACC
1161	GAG	1215 CCA P	1269 TTA L	1323 TAC Y	.377 GCC A	431 GAT D	485 AGG R
	AAT N	AGG R	TYPT	AAC N	CAC H	1 TTG L	1 GGA G
	GAT D	AAA K	GAG	GCC A	CTG	CAG Q	CCG
1152	CIT	1206 CAT H	1260 TGT C	314 GAA E	368 GTC V	422 GAT D	476 CAC H
	TTA	ACG	GTA V	ATC I	1 GAC D	CTC L	. 1 GAT D
	CAA	ATT I	GGA G	GTG V	GCC A	AGC S	GTG V
1143	TCT	1197 GAA GCC E A	1251 TYY F	1305 CAA Q	.359 GCT A	413 GGA G	467 GAC D
	ATC I	GAA	CGG	1 TYC F	CAT H	1 AAG K	1 CAT H
	TGT ATC TCT C I S	TTG	1251 TCT CGG TYT S R F	1305 TGG TTC CAA W F Q	1359 ACC CAT GCT T H A	1413 GTA AAG GGA V K G	1467 GTC CAT GAC V H D

FIGURE 4D

						•
1566 ACC T	1620 AAT N	1674 TTG L	1728 ATC I	1782 GCT A	836 TGT C	GTG GCC AAC CCA TGC CGC CCC TTG GAC CTG TGC ATT GAA TGG GCT GGG V A N P C R P L D L C I E W A G
CAC H	AAG K	GTT V	AGC	CCT P	AAG K	3CT (
CAC H	TTC	ATG M	AAC N	AAC	ATT /	7 58 7 7
1557 AGT S	1611 ATT I	1665 GAC D	1719 GTG V	773 TGC	827 ATG /	381 3AA 1 E V
GAG	AAC	ATT	1 TYYT F	1 GAA E	ATG A	18 ATT (
CTG	TGC	ATT I	AAG K	TGT	200	, Sec 2
1548 GTT V	1602 AAA K	.656 GCT A	710 AAT N	764 GAC D	818 AAA (372 216 1
GCT	ACC T	CAG Q	otc	AGC S	ATC A	18 3AC (
ACT T	GAC	CGC R	CAT H	၁၅၅	CIG	
1539 GAC D	1593 AAG K	1647 CTG L	.701 GAA E	755 GAA E	809 ATC (I	363 CCC 7
AAT N	GTC	ACG	1 TYY F	1 ATT I	CAA	11 CGC (
TAC Y	ACG	CGA R	CAC H	GAG E	AAC	IGC (
1530 CTT L	1584 CTC L	1638 TAT Y	.692 AAA K	746 GCT A	800 GAA E	854 CCA 7 P (
GTG V	CAG	CAT H	ACA T	1 GCA A	CCT C	AAC N
GCT	TTC	AAC	ATG M	ATG M	TTC	3CC A
1521 CTT L	1575 GCC A	.629 AGG R	.683 GAG E	737 CCA P	791 AAC N	845 3TG (
GAG E	CTG	GAC D	ACA T	1 AAG K	AAG K	3AC O
1521 AGT GAG CTT S E L	1575 GCC CTG GCC A L A	1629 ATT GAC AGG I D R	1683 GCA ACA GAG A T E	1737 AAC AAG CCA N K P	1791 GGG AAG AAC G K N	1845 GCT GAC GTG A D V

FIGURE 4E

1944	GAG GAG TAT TTT GCA CAG ACT GAT GAA GAG AAG AGA CAG GGA CTA E E Y F A Q T D E E K R Q G L	1962 1971 1980 1989 1998 ATG CCA GTG TTT GAC CGG AAT ACC TGT AGC ATC CCC AAG TCT CAG M P V F D R N T C S I P K S Q	2016 2025 2034 2043 2052 ATT GAC TAC TTC ATA ACA GAC ATG TTT GAT GCT TGG GAT GCC TTT I D Y F I T D M F D A W D A F	2070 2079 2088 2097 2106 CCA GCC CTG ATG CAA CAT TTG GCT GAC AAC TAC AAA CAC TGG AAG P A L M Q H L A D N Y K H W K	2124 2133 2142 2151 2160 GAC CTA AAG TGC AAA AGT TTG AGG CTT CCA TCT GAC AGC TAA AGC D L K C K S L R L P S D S	2178 2187 2196 2205 2214 GAG GGG GCC TCT TGA CCG ACA AAG GAC ACT GTG AAT CAC AGT AGC	2232 2241 2250 2259 2268 AGG CCT TCC TTT CTA ATG ACA ATG ACA GGT ATT GGT GAA GGA GCT
	CAG (AAG T K	GAT G	CAC T	AGC T	CAC A	SAA GC
1935	G AGA R	1989 C CCC P	2043 r TGG W	2097 2 AAA K	2151 . GAC D	2205 AAT	2259 F GGT (
	X X	AT(GC.	TA(Y	TCT	GTG	ATT
•	GAG	AGC S	GAT D	AAC	CCA	ACT	GGT
1926	GAA E	1980 TGT C	2034 TTT F	2088 GAC D	2142 CTT L	2196 3 GAC	2250 3 ACA
	GAT D	ACC	ATG M	GCT	AGG .	AAG	2 ATG
	ACT T	AAT N	GAC	TTG	TTG	ACA	ACA
1917	CAG Q	1971 CGG R	2025 ACA T	2079 CAT H	1133 AGT S	2187 CCG	2241 ATG
	GCA A	GAC	ATA I	CAA	AAA K	2 TGA	2 CTA
	TTT	Jalal E	TTC	ATG	TGC	TCT	TYY
1908	TAT Y	1962 GTG V	2016 TAC Y	2070 . CTG	124 AAG K	2178 ; GCC	2232 TCC
	GAG	CCA P	GAC	2 6CC	2 CTA L	2 GGG	2 CCT
	GAG	ATG M	ATT I	CCA P	GAC D	GAG	AGG
1899	TCT	1953 GTG V	2007 TTC F		. 2115 TA GAT D		
•	AGG ATC TCT R I S	1953 CCT GTG GTG P V V	TCT	2061 GCA CAT CTG A H L	. 2 CTA L	2169 CAA GCC ACA	2 AAC
	AGG R	CCT	2007 ATC TCT TTC I S F	GCA A	ACA CTA GAT T L D	CAA	2223 GTA AAC GAG

IGURE 4F

Docket No.: PF-0057-4 CON Inventors: Au-Young et al. Title: CyclicNucleotide Phosphodiesterases Serial No.: To Be Determined

2322	2376	2430	2484	2538	2592	2646	
T'TA GAA	CAG AAC	TCA ATC	GGT GCC	AGC TCA	CAA GAA	AAA AAA	
	TGA	TTG 1	CIT G	ATC A	CCT C	CTA A	
2313	2367	2421	2475	2529	2583	2637	
CAA ATT TCA TTC	ACT TAA	GTA CCC	CAA AGC	CTA GTG 2	TGT TTT (ATT TAT C	
CAA	AAT		AAG		GAC 1	CAG A	
2304	2358	2412	2466	2520	2574	2628	•
AGT.CCC	CIT TTG	TCA TCC TGT	CAC AGG	GTA GCT TAG	GTT TAG CTT GAC	TCT GAA CAG	
TCA	GTT	CTG	299	TAA	GIT	TTA '	
2286 2295 2304	2340 2349	2403	2448 2457	2511	2565	2619	
TTG ACC TTG AAT CAT TCA AGT CCC	TGA AGA AAA ATA TAT GTT	GCA AAC TCC TYT GCT CTG	TCA CTG TAA CTA GCA GGC	GGT GAC TAA	ATT GCT	AGG AGC	
TTG	AAA	Til	TAA	GAT	ATC	ATA	
2286	2340	2394	2448	2502	2556	2610	
TTG ACC	TGA AGA	AAC TCC	TCA CTG	TCC CAG GAT	AAA GTC	GGA TTC ATA	
TAT	CCA	GCA	GGT	ATC '	ATA 1	GAA (AA 3.
2277	2331	2385	2439	2493	2547	2601	2655
AAT GTT TAA	AGT TAT GTT	AAA TAC TYG	CAT GGA GCT	TGT GAG CTC	TTT ACC	CGA TCT	AAA AAA AAA 1
AAT	AGT	AAA	CAT	TGT	TCC	CAT	AAA

FIGURE 4G

FIGURE 5A

57 LDTINSCIRIGKEWQGIYYARKKNGDNIQONVKIIPVIGQ PDE8A(E) 61 LDTINTCIKKGKEWQGVYYARRKSGDSIQOHVKITPVIGQ PDE8B(E)
GGKIRHYVSIIRVC NGNNKAEKISECVOSDTRTDNOT PDE8A(E) 11 GGKIRHFVSLKKLCCTTDNNKQIHKIHRDSGDNSQTEPHS PDE8B(E)
GNQVSEYISNT GKHKDRRKGSL
RRKESIDVKSISSRGSDAPSLQNRRYPSMARIHSMMARIHSM DKONRVETDSDAPBOD
APITKVINVINAAQENSPMPVTEALDRVLETTEL
IEAPITKVIN I INAAOESSPMPVTEALDRVLEILR

FIGURE 5B

12 Y S P Q F G A K D D D P H A N D L V G G L M S D G L R R L S G N E Y V L S T K N S Y S P Q L G T K D D D P H A N D L V G G L M T D G L R R L S G N E Y V L S T K N N S P Q L G T K D D D P H A N D L V G G L M S D G L R R L S G N E Y V L S T K N N S P Q L G T K D D D P H A N D L V G G L M S D G L R R L S G N E Y V L S T K N N S P Q L G K D D V P P R I A R A M E N E E Y W D F D I F E L E A S Q V H Q S H S H L A M P I T I N D V P P C I S Q L L D N E E S W D F N I F E L E A S Q V H Q S H S H L A M P I T I N D V P P C I S Q L L D N E E S W D F N I F E L E A S Q V H Q S H S I I T P I S L D D V P P R I A R A M E N E E Y W D F D I F E L E A S Q V H Q S H S I I I T P I S L D D V P P R I A R A M E N E E Y W D F D I F E L E A S Q C A S E T L R S W L Q I I E A S Q C A S E T L R S W L Q I I E A S Q C A S E T L R S W L Q I I E A S Q C A S E T L R S W L Q I I E A S Q C A S E T L R S W L Q I I E A S Q C A S E T L R S W L Q I I E A S Q C A S E T L R S W L Q I I E A S Q C A S E T L R S W L Q I I E A S Q C A S E T L R S W L Q I I E A S Q C A S E T R E T L R S W L T L E D C D D C D D C D C C C C C C C C C C
--

I A A T I H D V D H P G R T N S F L C N A G S E L A I L Y N D T A V L E I A T V H D V D H P G R T N S F L C N A G S E L A V L Y N D T A V L E I A A T I H D V D H P G R T N S F L C N A G S E L A I L Y N D T A V L E
LFAAAIHDVDHPGVSNQFLINTNSELALMYNDESVLEN
12 H H A A L A F Q L T T G D D K C N I F K N M E R N D Y R T L R Q G I I D M V L A PDE8A(E) 20 H H T A L A F Q L T V K D T K C N I F K N I D R N H Y R T L R Q A I I D M V L A PDE8B(E) 48 H H A A L A F Q L T T G D D K C N I F K N M E R N D Y R T L R O G I I D M V L A PDF8A
HLAVGEKL-LQEENCDIFQNLSKRQRQSLRKMVIDMVLA
EMTKHFEHVNKFVNSINKPLATL EMTKHFEHVNKFVNSINKPMAAE EMTRHFEHVNKFVNSINKPLATL
TDMSKHMTL LADLKTMVETKKVTSGVL
RTPENRTLIKRMLIKCADVSNPPENQILIKRMMIKCADVANP
LLKTPENRTLIKRMLIKCADVSNPCRPLOYCIEWAARISEE PXNOILIKIMMIKCAXXXNPCRPINICIEWAARISEE
S DRIQVLRNMVHCADLSNPTKPLELYRQWTDRIM

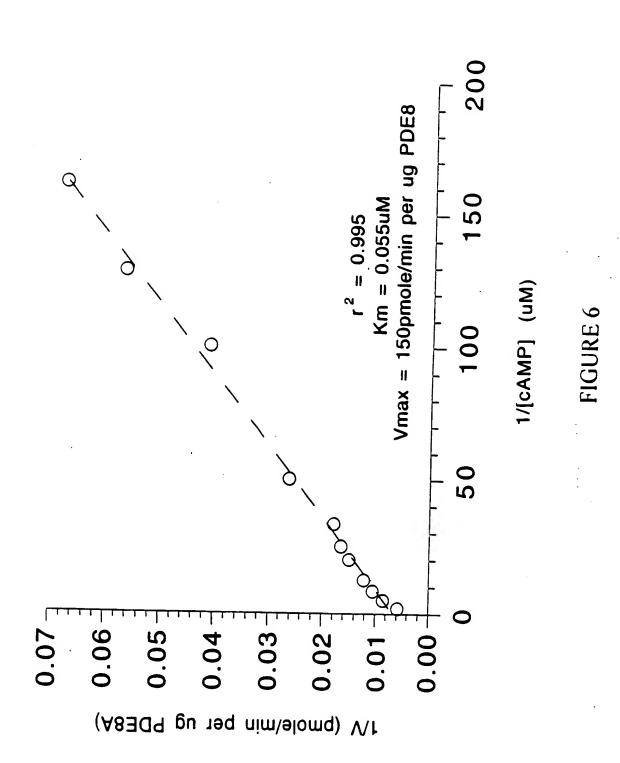
FIGURE 5E

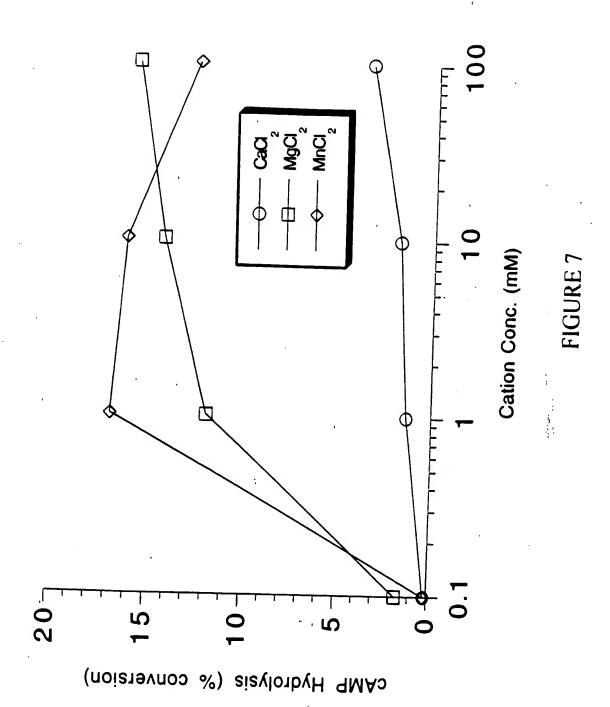
Q G L P V V M P V F D R N T C S I P K S Q I S F I D Y F I T PDE8A(E) Q G L P V V M P V F D R N T C S I P K S Q I S F I D Y F I T PDE8B Q G L P V V M P V F D R N T C S I P K S Q I S F I D Y F I T PDE8A Q G L P V V M X V F D R G M E I S - P M C D K H T A S V E K S Q V G F I D Y I V H G1705952	DLPDLMQHLDNNFKYWKGLDEMKLRNLRPPPDE8A(E) HLPALMQHLADNYKHWKTLDDLKCKSLRLPPPDE8B(E) DLPDLMQHLDNNFKYWKGLDEMKLRNLRPPPDE8A	PDAQDILDTLEDNRDWYHSAIRQSPSPPL	PDESA PDESB SLPDKFQFELTLEEEEEDSLEVPGLPTTE g1705952	PDE8A (E) PDE8B (E) PDE8B	PDE8B O A V D W S K V K G P S T T V V E V A E R L K Q E T A S A g1705952
M L L L L L L L L L L L L L L L L L L L	DMFDAWDAFVDLPDMFDAWDAFVDLPDMFDAWDAFVDLP	O .	и о ч и в и в и в и в и в и в и в и в и и	n & on	AVD

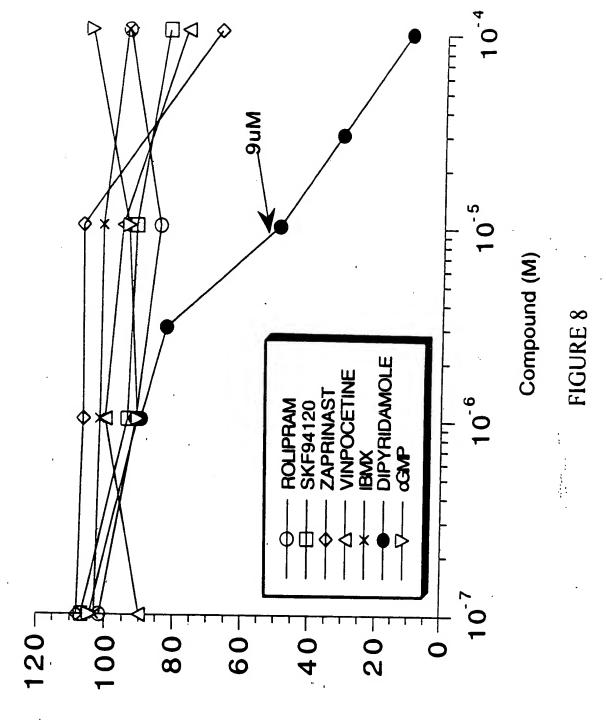
FIGURE SE

PDE8A (E) PDE8B (E) PDE8A PDE8B 91705952	PDE8A (E) PDE8B (E) PDE8A PDE8B	PDE8A (E) PDE8B (E) PDE8A PDE8B
PDE8A PDE8B PDE8A PDE8B	PDE8A PDE8B PDE8A PDE8B	PDE&A PDE&B PDE&A PDE&B
YGAPQESMEAVGCSFSPGTPILPDVRTLSSSEEAPGLLGL	PSTAAEVEAPRDHLAATRACSACSGTSGDNSAIISAPGRW 9	P P P P P P P P P P P P P P P P P P P
13 18 49 1 24	13 84 1 84 1 84	E1 81 44

FIGURE SF







cAMP Hydrolysis (% control)